

# The Doorway

A Publication of The Gill Corporation

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Volume 61 - Number 2 - Spring 2025

## OOPP | PMA | EPA | STC

FABRICATED PANELS & LINERS



80 YEARS  
1945 - 2025



ANTIMICROBIAL TREATED

# A TRUSTED NAME IN MANUFACTURING & INNOVATION

## THE LEGACY OF THE GILL CORPORATION

Since 1945, The Gill Corporation (TGC) has been a leading supplier of Original Equipment Manufacturer (OEM) products for aircraft, starting with the belly baggage linings for the Douglas DC-6. Over the decades, TGC has broadened its offerings and expertise to address the evolving demands of the aviation industry.

As a vertically integrated company, TGC produces honeycomb, laminates, adhesives, prepregs, sandwich panels, complex machined parts from composites, aluminum and titanium, and bonded structures and fabricated assemblies. We specialize in fabricating complex replacement parts ready-for-installation including passenger floor structures, cargo hold sidewalls and floors, bulkheads, and interior cabinetry.

Our capabilities encompass manufacturing engineering, reverse engineering, composites testing, CNC machining, robotics, and assembly. We generate detailed drawings and Bills of Materials (BOM) from scratch and provide comprehensive Testing and Comparative Analysis data to ensure the highest quality and performance products.

Aircraft repair and maintenance is vital for safety, efficiency and operator profitability, as flight disruptions can affect passengers or millions of dollars of goods being transported. Performing repairs and maintenance with OEM parts often involve high costs and long lead times.

TGC offers a wide range of cost-effective alternative parts and complete assemblies as Owner/Operator Produced Parts (OOPP), Federal Aviation Administration (FAA) Parts Manufacturer Approval (PMA), and Supplemental Type Certification (STC). All of these options meet the exacting quality, mechanical and performance requirements of OEM parts but at lower costs and shorter lead times.

TGC collaborates closely with our customer to customize these alternative solutions to ensure the exact requirements are met with precision and efficiency. Additionally, we are expanding our reach with European Parts Approval (EPA), a system similar to PMA that operates within the European regulatory framework. This allows airlines to utilize approved non-OEM components without compromising safety or quality.

By leveraging TGC's OOPP/PMA/EPA/STC solutions, airlines, operators and Maintenance, Repair, and Overhaul (MRO) facilities can streamline maintenance, cut costs and uphold the highest standards of safety and performance. TGC is proud of our history as a trusted partner and is positioned to remain at the forefront of providing innovative solutions that keep the aviation sector flying smoothly.



## OUR CAPABILITIES

### OEM (ORIGINAL EQUIPMENT MANUFACTURER)

TGC provides a wide range of components, such as honeycomb, laminates, panels, titanium, and aluminum machined parts, bonded and fabricated assemblies, including drop-in-ready products, critical for aircraft manufacturers. Our OEM products are known for their quality and reliability, ensuring that they meet the stringent requirements of the aviation industry.

### OOPP (OWNER/OPERATOR PRODUCED PARTS)

TGC works closely with aircraft owners and operators to enhance existing product designs for improved durability and strength. Our OOPP expertise leveraging our vertically integrated manufacturing capabilities ensures products are tailored to your needs, delivering a cost-effective and efficient solution for aircraft maintenance, reconfigurations and upgrades, with typically the fastest development through implementation timelines.

### PMA (PARTS MANUFACTURER APPROVAL)

TGC holds FAA approval to design and manufacture PMA parts. Our PMA parts, including floor panels and cargo sidewall liners offer a rapid and cost-efficient solution for your Maintenance, Repair, and Overhaul (MRO) needs, matching OEM performance and reliability at a lower cost.

### EPA (EUROPEAN PARTS APPROVAL)

Compared to PMA, the European Parts Approval (EPA) system aligns with the European regulations. TGC's EPA-approved components enable airlines to utilize non-OEM components while maintaining safety and quality. These products provide reliable and cost-effective alternatives for aircraft maintenance, reconfigurations and upgrades in the European market.

### STC (SUPPLEMENTAL TYPE CERTIFICATE)

TGC collaborates with customers to obtain Supplemental Type Certificates (STCs), allowing modifications to original product designs. The STC provides comprehensive engineering data, drawings, and necessary analyses or tests that demonstrate the modification's safety and compliance with regulatory standards.



# OEM VS OOPP/PMA/EPA

## BENEFITS

	OEM	OOPP   PMA   EPA
<b>MANUFACTURE</b>	Original Part	<b>OOPP:</b> Modified Original Part with the Operator <b>PMA/EPA:</b> Modified Original Part with FAA/EASA Approval
<b>SPECS</b>	Meet Airworthiness Regulations	Meet Airworthiness Regulations
<b>PRICE</b>	Original Price	Less Expensive
<b>AVAILABILITY</b>	From Manufacturer	From Multiple Suppliers – Shorter Lead Times
<b>QUALITY</b>	High Quality and Reliable Performance	Comparable, High Quality and Reliable Performance



## COMPARISON

TGC provides engineering services to optimize parts to your requirements and manages the necessary certifications to complete your project. Contact us to discuss your needs.

FEATURE	OOPP	PMA/EPA	STC
<b>APPROVING AUTHORITY</b>	Operator's internal team	FAA/EASA	FAA/EASA
<b>WHAT IT APPROVES</b>	Production of a part	Production of a part	A significant change to an aircraft's type design (modification)
<b>FOCUS</b>	Part design and manufacturing process	Part design and manufacturing process	Design change and installation
<b>PURPOSE</b>	For Owner/Operator's own use	To authorize production of replacement or modification parts	To authorize an aircraft modification
<b>SALES RESTRICTIONS</b>	Limited to the owner/operator's own aircraft	Can be sold to any airline/operator	Can be sold to subsequent owners of the modified aircraft

**OOPP** is when an operator produces a part for their own use.

**PMA/EPA** approves the production of a part.

**STC** approves a change to an aircraft's design.

### OOPP

Empire Airlines, the largest regional operator for FedEx, became the North America launch customer for the ATR 72-600F freighter in 2020. Facing reliability, performance, availability, and cost issues with the ATR OEM floor panels, Gordon Davis, Maintenance Programs and Configuration Manager, led the search for solutions to enhance fleet efficiency in the cargo industry. Empire partnered with TGC to explore innovative alternatives.

Through close collaboration, including site visits, joint testing, and in-service evaluations, Mr. Davis and TGC personnel assessed material compatibility and pursued PMA (Parts Manufacturer Approval). Mr. Davis ensured TGC solutions met industry standards and Empire Airlines requirements by leveraging his expertise. The partnership prioritized engineering, quality and manufacturing.

After evaluation, TGC's Gillfloor® 4417 panel, a high-strength, fiberglass-reinforced epoxy with a meta-aramid honeycomb core, was selected for cargo compartment flooring. Precision-machined and rigorously inspected, the fabricated panel assemblies are delivered ready-to-install, improving reliability and performance for Empire's operations.



Noel VanHook (TGC),  
Gordon Davis (Empire Airlines),  
and Patrick Chiu (TGC)

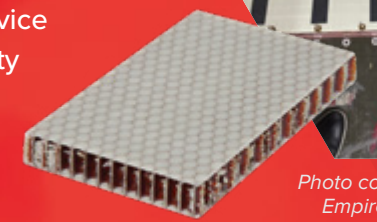


Photo courtesy of  
Empire Airlines

### Gillfloor® 4417 Panel

## CASE STUDIES

### STC

TGC partnered with Aviation Technical Services (ATS) to advance its cabin interior STC programs by expanding FAA-approved allowables for **Gillfab® 4122S** to include a 1.0" thick panel construction. This project built on the use of Gillfab® 4122S in the ATS Crew Rest Module (CRM), a self-contained, transferable module that enhances operational efficiency for freight operators while prioritizing crew comfort and safety.

Gillfab® 4122S is a lightweight, low smoke emission composite sandwich panel featuring woven glass reinforced phenolic facings bonded to meta-aramid honeycomb core. An optional 1 mil white Polyvinyl Fluoride Film (PVF) overlay can be added on one or both sides. This panel is ideal for aircraft interior applications, including sidewalls, cargo compartments, bulkheads, galleys, lavatories, and ceiling panels.



Photo courtesy of ATS

Without PVF



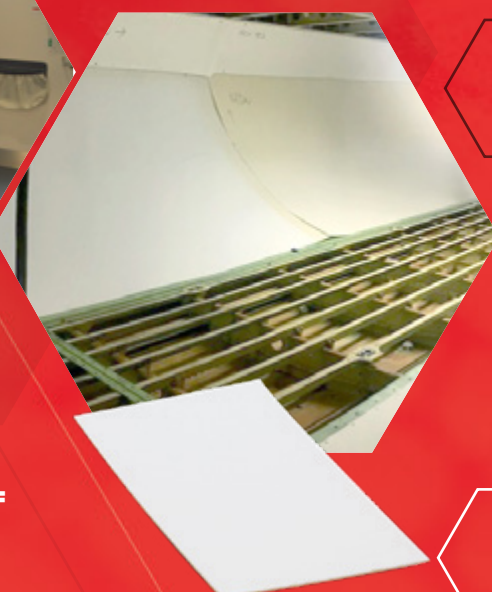
With PVF

### Gillfab® 4122S Panel

### OOPP

TGC produce OOPP liner kits for one of the largest operators in the world, featuring **Gilliner® 1366D** cargo liner. Each kit is precision-cut based on customer-provided detailed drawings. Components are carefully packaged into complete shipset kits, ready for delivery and installation.

Gilliner® 1366D is a high-impact and high-wear resistant liner, constructed from woven E-glass and S-glass cloth with a nylon surface scrim and polyester resin system. It is designed for cargo compartments and bulkhead facings in aircraft.



### Gilliner® 1366D Cargo Liner

At TGC, we are committed to delivering innovative, high-quality solutions that empower the aviation industry to operate safely and efficiently. From our FAA-approved PMA and STC programs to our tailored OOPP offerings and expanding EPA approvals, we provide cost-effective, reliable alternatives to OEM parts. Whether it's crafting durable Gillfab® panels, impact-resistant Gilliner® cargo liners, or versatile Gillfloor® panels, our expertise ensures your aircraft maintenance and modification needs are met with precision. Contact us today to explore how TGC can support your operations with cutting-edge products and unparalleled service, keeping your fleet operating smoothly.

### PMA/EPA

TGC secured PMA approval for **Gilliner® 1366W**, a woven E- and S-glass laminate reinforced with an aramid veil to optimize strength, weight, and cost. This material excels in demanding aircraft environments, such as aircraft cargo compartments and bulkhead facings, particularly for lower sidewalls. It offers excellent resistance to wear, impact damage, and fastener hole tear-out, making it a reliable choice for maintenance and repair needs.



### Gilliner® 1366W Cargo Liner

# Fun Facts

*Even though Irish is the official language of Ireland, Polish is more widely spoken.*

*The Stockholm archipelago has more islands than the Pacific Ocean, at around 30,000.*

*Pope Francis has been given many extravagant gifts over the years, and one of them was a Harley-Davidson motorcycle. However, rather than keeping it for his own pleasure and adventures, he sold it off and used the money to benefit homeless people.*

*In Japan, Domino's started testing pizza delivery via reindeer in 2016.*

*The motto on the United Kingdom's Royal Coat of Arms is in French. The motto is "Dieu et mon droit," which means "God and my right."*

*The average household income of the top 1% in the United States is \$1,260,508 per year.*

*Disney sold the streaming right for the original Star Wars films in 2016 to Turner until 2024. Disney has since decided to start a streaming service and has tried asking for the rights back, but Turner refuses every time.*

*Gaming-related accidents increased by 26.5% during the first 5 months of Pokémon Go being released. This included 2 deaths and \$25.5 million in damages.*

*Helen Keller was related to Robert E. Lee. Her paternal grandmother was second-cousins with him.*

*During the 1908 Olympics in London, the Russians showed up 12 days late due to the fact that they were using the Julian calendar instead of the Gregorian calendar.*

*In efforts to undercut the Dreamcast's sales of the upcoming SEGA release, Sony announced the PlayStation 2 and exaggerated its performance capabilities.*

*The line "Born and raised in South Detroit" in Journey's "Don't Stop Believin'" makes no sense, as there is no South Detroit. Detroit, Michigan, lies on the northern side of the Detroit River, and Ontario, Canada, lies to its south.*

*On one slow news day on April 18, 1930, a BBC radio announcer blatantly said, "there is no news."*

*If you cut a starfish, it won't bleed - it doesn't have blood! Rather, they circulate nutrients by using seawater in their vascular system.*

*12% of the world's total languages are found in Papua New Guinea, which has over 820 indigenous languages. There are more languages on this island than in any other country.*

*The hottest temperature ever recorded in Washington state was at Ice Harbor Dam at 118 °F (47.8 °C) on August 5, 1961.*



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